

REMARKS

Claims 1-10 and 13-15 are pending in the application.

The examiner had rejected claims 1, 4-10, and 13-15 under 35 U.S.C. 102(a) as being anticipated by Gardner (US 6,243,476). The examiner further indicated that claims 1-2, 4, 5, 7-8, 10 and 13-15 are rejected under 35 U.S.C. 102(a) as being anticipated by Fujita (US 6,035,045). Claim 3 was objected to as being dependant upon a rejected base claim, but noted by the Examiner to be allowable if rewritten in independent form including all of the limitations of the base claim. Applicants thank the examiner for this indication of allowable subject matter.

Applicants have amended claims 1 and 13-15. Support for these amendments may be found throughout the specification, including page 15 and FIGS. 7-8.

Claim Rejections Under 35 U.S.C. §102

The examiner had rejected claims 1, 4-10, and 13-15 under 35 U.S.C. 102(a) as being anticipated by Gardner (US 6,243,476). For at least the reasons set forth below, applicants believe that the amendments overcome the rejections.

Gardner's shelving filter is used to implement a high frequency gain modification to the synthesized HRTF's to accommodate the rotation of the listener's head (col. 17, lines 1-7; lines 30-35). In Gardner's second embodiment, it is these gain adjustments that are used to maintain the appropriate power ratios for high frequencies to compensate for either variations in the listener's head angle and/or sound panning. But Gardner makes no teaching or suggestion wherein any processing equivalent to high frequency cut filtering is performed equally on each ear. Instead Gardner focuses on a new position of the head and updating the power ratios by using a shelving filter that operates on each channel. The filter gains are updated as the listener moves and can be implemented with a precomputed set of gains gL and gR for the respective ears (col. 17, lines 20-28).

Applicant submits also that Fujita (US 6,035,045) fails to teach or suggest all of

the limitations of claim 1. On page 9 of the office action, the Examiner states that Fujita teaches that the degree of HF-cut filtering being settable according to the given direction of the virtual sound source relative to said preferred position (amount of gain shown in Figure 13, col. 18, lines 62-65). Applicant respectfully disagrees. Fujita's FIG. 13 depicts the level controlled by a level control unit of the connecting means shown in FIG. 11 and its relationship with the sound image localization direction. (col. 11, lines 52-55) These levels, however, do not refer to the high frequency content. As indicated in Fig. 11, the signals reaching the level control unit 101 have previously been processed by the low pass filter 100. Hence the high frequency content has been **removed** and the impact of the level control unit affects only the low frequency content in the input signal. In other words, Fujita teaches only direction dependant attenuation of the signal's low frequency components. For at least this reason, Fujita fails to teach or suggest all of the limitations of claim 1, including that "the HF-cut filtering being settable according to the direction of the virtual sound source relative to said preferred position. Further, there is no teaching that the HF filtering is substantially the same in the left and right channels as required in claim 1.

Independent claims 13-15 are submitted to be allowable for the same reasons as discussed above with respect to claim 1. Claims 2-10 depend from claim 1 and are submitted to be allowable for at least their dependencies from an allowable claim. Moreover, the dependent claims recite additional limitations, and are therefore allowable for these reasons as well. Further discussion of these distinctions is believed unnecessary in light of the distinctions discussed above relative to the independent claims.

Conclusion

Accordingly, it is submitted that all issues in the Office Action have been addressed, and withdrawal of the rejections is respectfully requested. Applicants believe that this application is in condition for allowance, and respectfully request a prompt passage to issuance. If the Examiner believes that a telephone conference would expedite the prosecution of this application, he is invited to contact the Applicants' undersigned attorney at the telephone number set out below.

Respectfully submitted,

Russell N. Swerdon
Registration No. 36,943

Creative Labs, Inc.
1901 McCarthy Boulevard
Milpitas, CA 95035
Phone: 408-428-6600